

Appl. No. 09/764,163

PATENT**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. - 79. (Canceled)

80. (Currently Amended) A polypeptide consisting essentially of:

a first interactor domain covalently bonded to a circularly permuted ~~marker~~  $\beta$ -lactamase protein through an N-terminal breakpoint of the circularly permuted ~~marker~~  $\beta$ -lactamase protein and a second interactor domain covalently bonded to the circularly permuted ~~marker~~  $\beta$ -lactamase protein through a C-terminal breakpoint of the circularly permuted ~~marker~~  $\beta$ -lactamase protein, wherein said circularly permuted ~~marker~~  $\beta$ -lactamase protein is functionally reconstituted only upon binding of said first interactor domain and said second interactor domain to a single ligand.

81. - 83. (Canceled)

84. (Previously Presented) The polypeptide of claim 80, wherein said N-terminal break point and said C-terminal break point are within a solvent exposed loop between elements of secondary structure within the enzyme.

85. (Currently Amended) The polypeptide of claim 80, wherein said circularly permuted ~~marker~~  $\beta$ -lactamase protein is a  $\beta$ -lactamase protein that has been circularly permuted, said  $\beta$ -lactamase protein consisting of amino acids 26 to 288 of the following sequence prior to circular permutation:

His	Pro	Glu	Thr	Leu	Val	Lys	Val	Lys	Asp	Ala	Glu	Asp	Gln	Leu	Gly
26				30				35						40	
Ala	Arg	Val	Gly	Tyr	Ile	Glu	Leu	Asp	Leu	Asn	Ser	Gly	Lys	Ile	Leu
			45					50						55	

Appl. No. 09/764,163

PATENT

Glu Ser Phe Arg Pro Glu Glu Arg Phe Pro Met Met Ser Thr Phe Lys  
 60 65 70  
 Val Leu Leu Cys Gly Ala Val Leu Ser Arg Ile Asp Ala Gly Gln Glu  
 75 80 85  
 Gln Leu Gly Arg Arg Ile His Tyr Ser Gln Asn Asp Leu Val Glu Tyr  
 90 95 100 105  
 Ser Pro Val Thr Glu Lys His Leu Thr Asp Gly Met Thr Val Arg Glu  
 110 115 120  
 Leu Cys Ser Ala Ala Ile Thr Met Ser Asp Asn Thr Ala Ala Asn Leu  
 125 130 135  
 Leu Leu Thr Thr Ile Gly Gly Pro Lys Glu Leu Thr Ala Phe Leu His  
 140 145 150  
 Asn Met Gly Asp His Val Thr Arg Leu Asp Arg Trp Glu Pro Glu Leu  
 155 160 165  
 Asn Glu Ala Ile Pro Asn Asp Glu Arg Asp Thr Thr Met Pro Val Ala  
 170 175 180 185  
 Met Ala Thr Thr Leu Arg Lys Leu Leu Thr Gly Glu Leu Leu Thr Leu  
 190 195 200  
 Ala Ser Arg Gln Gln Leu Ile Asp Trp Met Glu Ala Asp Lys Val Ala  
 205 210 215  
 Gly Pro Leu Leu Arg Ser Ala Leu Pro Ala Gly Trp Phe Ile Ala Asp  
 220 225 230  
 Lys Ser Gly Ala Gly Glu Arg Gly Ser Arg Gly Ile Ile Ala Ala Leu  
 235 240 245  
 Gly Pro Asp Gly Lys Pro Ser Arg Ile Val Val Ile Tyr Thr Thr Gly  
 250 255 260 265  
 Ser Gln Ala Thr Met Asp Glu Arg Asn Arg Gln Ile Ala Glu Ile Gly  
 270 275 280  
 Ala Ser Leu Ile Lys His Trp

Appl. No. 09/764,163

PATENT

285

(SEQ ID NO: 2);

wherein said N-terminal breakpoint and said C-terminal breakpoint are within 10 amino acids of an amide bond junction between two amino acids selected from the group consisting of asparagine 52 and serine 53, leucine 91 and glycine 92, glutamine 99 and asparagine 100, proline 174 and asparagine 175, glutamic acid 197 and leucine 198, lysine 215 and valine 216, alanine 227 and glycine 228, and glycine 253 and lysine 254.

86. (Currently Amended) The polypeptide of claim 85, wherein said two amino acids are selected from the group consisting of proline 174 and asparagine 175, glutamic acid 197 and leucine 198, lysine 215 and valine 216, alanine 227 and glycine 228, and glycine 253 and lysine 254.

87. (Currently Amended) The polypeptide of claim 85, wherein said two amino acids are glutamic acid 197 and leucine 198.

88. (Currently Amended) The polypeptide of claim 80, wherein said ligand is a protein ligand.

89. (Cancelled)